



Examining the Factors Affecting Reading Readiness of Kindergarten Students

Ei Phyo Khaing

Abstract

Reading is one of the core literacy skills of every individual and early reading for children has a great impact on future learning pathways and the success of school life. The purpose of this study was to investigate the reading readiness of kindergarten students in Myanmar and examine factors affecting reading readiness. A quantitative survey method was used in this study with a total of 222 kindergarten students from seven schools in Yangon and Rakhine selected using the multistage cluster sampling method. The Myanmar Reading Assessment Test (Cronbach's alpha of 0.925) for kindergarten was used to administer the reading readiness skills of the students. In addition, demographic factors related to students and parents' involvement in their children's learning were collected using a self-administered questionnaire. The statistical analysis methods used were descriptive statistics, percentiles, t test, and Analysis of Variance (ANOVA). According to the results, there were five reader groups: below basic (25.7%), basic (6.8%), satisfactory (11.3%), proficient (16.7%), and advanced (39.6%) levels. The results of the statistical analysis concluded that no preschool experiences, lower socioeconomic status, the region in which they live, and unsupportive parents were the main factors affecting reading readiness. Among these factors, preschool experience is the only solution that can be tackled to improve reading readiness than other factors. However, most children in Myanmar cannot yet access preschool programmes adequately. Therefore, the government, NGOs, INGOs, CSOs, CBOs, and other organisations should ensure that every child has the opportunity to attend preschool regardless of geographical barriers.

Keywords: *reading readiness, parental support, preschool experiences, socioeconomic status*

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1. Introduction

Reading skills are a basic building block of a child's literacy journey and a golden key to opening the door to knowledge treasures. It is so important for every child to learn this skill in their early childhood on account of relating to other subjects in the curriculum, such as math and science. According to Myanmar Education System, kindergarten is the foundation of the whole schooling system and starting point of early literacy development, setting the stage for future development and success in school and life. Children enter kindergarten with vastly different family backgrounds, educational experiences, and capabilities, which significantly affect their early school education (Magnuson & Waldfogel, 2005).

A study conducted by Early Grade Reading Assessment in Myanmar stated that too many students have not learned to read or read well compared with other countries. In Myanmar, about 8.5 million students, with roughly 5 million in primary school, are receiving basic education. With a net primary enrollment rate of 88 percent, 75 percent of first graders reach the fifth (and last) primary grade, but only 54 percent complete primary education, and most students leave school in the first two years of primary schooling (Sondergaard & Cloutier, 2015). There is a noticeable upward trend in the number of out-of-school children (OOSC) in Myanmar. According to the Education Management Information Systems (EMIS) (UNESCO Bangkok 2017), there were 1,015,340 OOSC pupils in Myanmar between 2006 and 2011. The majority of them were in primary education (533,906 students or 52.58%), lower secondary education (252,932 students or 24.91%), and upper secondary education (228,502 students or 22.5%) (Lar & Aung, 2018). Poor readers at age 7 have a dropout rate of one in six, which is six times greater than the rate for proficient readers (Hernandez, 2011). Enhancing early literacy skills is one of the best solutions to the school dropout problem (Denti & Guerin, 1999; Reschly, 2010). To reduce dropout rate, children must be prepared with basic, essential skills for their learning journey, especially reading readiness, before they enter kindergarten.

The first literacy instructors at home are the parents. Parents' joint reading with their children promotes print awareness, an important factor in developing literacy and reading skills (Zivan & Horowitz-Kraus, 2020). Due to their low socioeconomic situation, parents often do not prioritise their children's education, and the majority of parents lack the education and expertise necessary to support their children's reading development. Several studies have

discovered that family background factors are more significant than schools in explaining the majority of the variation in students' academic achievement (Berkowitz et al., 2017; Lawson & Farah, 2017; Reardon, 2011). Parental involvement in children's learning (Lara & Saracostti, 2019; Tazouti & Jarlégan, 2019), their education level (Dubow, 2009; Li & Qiu, 2018; Alibraheim, 2023) and their socio-economic status (Nja et al., 2022; Poon, 2020; Vadivel et al., 2023; Zhang et al., 2020) are important factors that need to be considered for the successful learning of children, especially when they enter kindergarten.

Accessing good-quality early childhood programme might affect the reading skills of children in kindergarten. Numerous studies (Bakken et al., 2017; Cetin et al., 2018; Mwoma, 2018) showed that preschool-experienced youngsters perform better academically than those without such experiences. However, majority of children in Myanmar cannot yet access preschool programmes adequately. According to the Myanmar Multiple Indicator Cluster Survey (2009–2010), inequities in ECE participation are evident in urban and rural areas (39.1% vs. 15.9%), the richest and poorest wealth quintiles (46.0% vs. 7.6%), and between states and regions (ranging from 5.4% in Rakhine to 60.7% in Kayah) (Nirmala Rao et al., 2017). In Myanmar, about 8.5% of 3-5-year-old children were receiving early childhood education (Ball, 2023). Living in remote areas, poor socio-economic status, lack of governmental support for free preschool programme for every child, and too expensiveness of private preschools are the root causes of early childhood education deficiency in Myanmar.

Therefore, this study examines the reading readiness of kindergarten students and identifies related factors such as parental involvement, preschool experiences, and socio-economic status in causing that readiness.

2. Literature review

2.1. Reading Readiness

Reading readiness refers to the child's holistic conditions being ready to learn reading and prerequisite skills before they have reached the stage of learning reading in a formal education setting. Downing and Thackray (1971) define reading readiness as the stage in development when, either through maturation or previous learning, or both, the individual child can learn to read easily and profitably. The time in a child's life when he becomes capable of reading involves a manifold readiness. The child must have reached readiness in four different

aspects of growth: physiological, psychological (emotional and intellectual), educational, and sociological (cultural and environmental). A child must be physically ready before he can learn to read. Psychological factors are every bit as important as physical factors in determining reading readiness. Both emotional and intellectual factors are directly related to the readiness state of a child's reading. Education must be considered in conjunction with the child's sociological background. Aside from any nursery school he may have attended, educational factors are a product of his family's culture and environment. The type of society the child comes from will have an important bearing on the direction his development takes. The educational environment factor is influenced by the kind of family the child belongs to. Some of the specific things the teacher hopes a child has learned before he enters first grade, which parents might teach their children, are how to hold crayons or pencils, to become familiar with writing implements, the ability to detect likenesses and differences, the ability to rhyme, being able to interpret pictures, the conventional left-to-right progression, and hopefully the attention span of the child will be sufficiently lengthened so he can sit still long enough to learn new things (Smith & Chapel, 1970).

Reading readiness is often referred to as the earliest stage of informal reading skills that involve young children. It is the basic common traits that help a child begin his academic endeavour without any difficulties (Jiar & Johan, 2008). It is the interactive outcome of a child's early development, school practises, and family supports in reading that enable a child engage in and benefit from school learning experiences (Feeney et al., 2001). A continuing concern of schools lies in the reading readiness of the children placed under their care. When children lack such readiness, it is recognised that they will either fail to learn at all or, at best, their learning will be slow (Downing & Thackray, 1971). One of the most significant objectives of the first school years is learning to read. Reading is the process of comprehending speech that has been written down. In other words, a beginning reader must connect written words to their existing vocabulary of spoken words, understand that each word is made up of letters, and recognise that each letter stands for a distinct sound used in speech. A youngster must master both word reading and reading comprehension in order to become a proficient reader (Vlachos & Papadimitriou, 2015).

Although age is not an absolute predictor of a child's success in reading (Gredler, 1973; Kalb & Ours, 2014; Bogaerds-Hazenberg et al., 2021), the majority of the pertinent research

noted that younger students performed worse in reading, mathematics, and language abilities than their older classmates and that the younger classmates appeared to be less prepared for school tasks than their older friends (Davis et al., 1980; DiPasquale et al., 1980; Donofrio, 1977; Rodriguez, 2016; Navarro et al., 2015; Thoren et al., 2016). However, when the children were adjusted for their socio-economic status (Gredler, 1978) and one or two years of preschool experiences, they were likely to exhibit comparable performance patterns in reading, regardless of their age (Gredler, 1980; Arteaga et al., 2014; Ansari, 2018; Ansari et al., 2019; Shah et al., 2017; Domitrovich et al., 2013). According to Vlachos and Papadimitriou (2015), some studies (Demeis & Stearns, 1992; Dietz & Wilson, 1985; Nam, 2014; Imlach et al., 2017) found no significant correlation between age and achievement, while others (Langer, Kalk, & Searls, 1984) found that the oldest students had significantly higher achievement at age nine compared to the youngest students, but that this difference had vanished by the time they were seventeen. Therefore, the relationship between age and reading readiness has always been controversial, and it could depend on the individual's innate potential, such as intelligence, and other scaffolding activities such as providing reading materials, parents' support in reading, and attending preschool before school age.

In Myanmar, school entrance age for kindergarteners is five years old, not younger than four years and eight months at the time of school's commencement date. The official commencement date for schools in Myanmar is June 1 of each year. Children have to learn to read and write the alphabet when they start school. They have different levels of reading readiness according to their chronological ages, their physical and mental development, their pre-school attendance before kindergarten, and their parents support in reading.

2.2. Theoretical Framework

Zone of Proximal Development (ZPD) Theory is the most widely used theory related to the various kinds of support that scaffold children's reading. Vygotsky defined the ZPD as *"the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers"* (Vygotsky & Cole, 1978). In ZPD, there are two levels of development: actual development and potential development. Actual development is the level of development of a child's mental functions that has been established as a result of certain already completed developmental cycles, and what the child

accomplishes with assistance or instruction dictates his level of potential development (Gauvain & Cole, 1997).

According to ZPD, the children's development can be maximised with the guidance of parents, teachers, and skilled peers. Therefore, the role of parents becomes a must in cultivating children in the early childhood years to gain readiness for the upcoming school years. There are positive effects when children are read to at least three times per week by parents (Walker et al., 2014), and a large body of existing research (Ece Demir-Lira et al., 2019; Iroegbu & Igweike, 2020; McMahon, 2010; Ramey et al., 1998; Rathbun & Hausken, 2001; Secord, 2009; Walker et al., 2014; Zivan & Horowitz-Kraus, 2020) found that children's literacy development and other good academic and social-emotional outcomes are influenced by home-based literacy practises, such as shared reading routines and direct instruction of reading and writing skills. The study Majzub and Kurnia (2010) showed that there was also a significant difference in children's reading readiness according to their parents' education level. This means that the education level of the parents has a significant impact on the child's reading readiness. Parents at the diploma level can prepare their children to be more ready to read. Parents' education level relates to their ability and knowledge of how to help their children learn to read at home (Majzub & Kurnia, 2010). Parents may foster literacy environments in their homes by reading aloud to their children, performing poetry aloud, and offering reading resources corresponding to their children's developmental stages. The socioeconomic factors of parents directly relate to parental supports for children's learning. Hence, it is a factor to be considered in getting children reading ready, which is not just a matter of sounds but rather a matter of rapidly and accurately getting the meaning of printed words on pages (Akubailo et al., 2015).

Preschools are the optimal places to equip children with necessary readiness skills for kindergarten. Preschool attendees are likely to become better readers than their non-preschool peers once they enter kindergarten (Barnett et al., 2005). Various kinds of learning programmes in preschools are designed to fit their developmental stage and can trigger children to reach their potential. Some preschool activities, such as rhyming activities for phonological awareness, letter guessing games using flashcards, story reading activities, and so on, are most widely used activities to encourage reading readiness and early literacy development.

By examining the results of earlier studies and published works, it is possible to draw the conclusion that socioeconomic position, preschool experiences, and parental support for

reading are crucial variables that link to kindergarten student's reading readiness. As a result, these elements are of research interest for this study.

3. Methodology

The main objective of this study was to ascertain the effects of kindergarten students' socioeconomic status, preschool experience, age, and region, as well as parental support for their child's reading programme, on their reading readiness. Firstly, Myanmar Reading Assessment Test (MRAT) for Kindergarten students was administered and demographic data were obtained from school records, parents, and teachers to determine whether they were associated with reading assessment scores.

3.1. Design of the Study

A quantitative research approach was undertaken in this study by means of survey design in order to meet the objectives of the study.

3.2. Participants

Table 1

Numbers of participants in each school in Yangon Region and Rakhine State

State/Region	Schools	Numbers of Boys	Numbers of Girls
Yangon	BEPS-2 (Hlaing)	15	15
	BEHS (Oakkan)	11	14
	BEPS-8 (Thingan Gyunn)	13	11
	BEPS-23 (Dala)	16	16
Rakhine	BEHS-Branch (Thin Bone Tan)	20	24
	BEPS (Yae Chan Pyin)	18	19
	BEPS (Bauk Thi Su)	16	14
	Total	109	113

The population of this study was kindergarten students from Myanmar. Due to larger population size, it is impossible to cover all of this kindergarten population. Therefore, multistage cluster sampling method was used to make data collection more practical for large populations. Firstly, kindergarten students from Yangon Region, the most developed region

where various kinds of education institutions are concentrated, and Rakhine State, one of the least developed regions with limited amount of educational opportunities, were selected randomly for phase one. For phase two, four schools from Yangon region and three schools from Rakhine state were selected randomly to get sample population. The obtained sample includes 109 male and all 114 female kindergarten students from seven (7) schools, as shown in table 1.

3.3. Instruments

After a thorough review of the reading readiness skills components, Myanmar Reading Assessment Test (MRAT) was constructed by the researcher. When the reading readiness test items were developed, a series of discussions and expert reviews were conducted on the appropriateness and relevancy of the items and item's length with experts in the field of Myanmar for content validity. On the basis of the discussion with experts, a refined reading assessment test was finally developed.

Myanmar Reading Assessment (MRAT) Test was constructed on the basis of the kindergarten students Myanmar textbook. MRAT is composed of 9 sub-tests and has a total of 41 items. These are letter recognition (5 items), poem recitation (5 items), rhyming (5 items), picture-word matching (10 items), word recognition (5 items), spelling (5 items), vocabulary (5 items), and short paragraph reading (1 item). Sample items in each sub-test are described.

a. Letter Recognition (5 marks)

(၁) ဆရာဖတ်ပြသော ဗျည်းများကို (✓) လုပ်ပြပါ။

ဆ	က	ဓ	မ	ဉ	ခ	ဗ	န	ဃ	ဈ	ဂ
	ည	င	စ	ဌ	ဒ	ဘ	ဋ	ထ	ဏ	
				တ	ပ	ဖ	ဗ			

b. Poem Recitation (5 marks)

အောက်ပါတို့ကို ရွတ်ဆိုပါ။



န နဖူးပြင် နံသာတင်

c. Rhyming (5 marks)




ပေးထားသောကွက်လပ်များကို ဖြည့်စွက်၍ ရွတ်ဆိုပါ။

ဆု ဆူ ဆူး


တု

d. Picture-Word matching (10 marks)

ပေးထားသော စကားလုံးနှင့် ကိုက်ညီသော ပုံကို ရွေးထုတ်ပါ။

သခွားသီး			
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ပေးထားသော ပုံနှင့် စာကို ယှဉ်တွဲပါ။

	လူငယ် ဖရဲသီး ပုလဲပုတီး
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e. Word recognition (5 marks)

အောက်ပါတို့ကို စာလုံးပေါင်း၍ ဖတ်ပြပါ။

(က) ဆီမီး (ခ) ညီလေး (ဂ) မော်တော်ကား (ဃ) ကိုယ်ကာယ (င) မွေးဖွား

f. Spelling (5 marks)

ပေးထားသောကွက်လပ်၌ သင့်လျော်သော အဖြေမှန်ကိုသာ ထည့်ပါ။

ဤရွာကလေး သာ သည်။ (ရာ၊ ယာ)

g. Vocabulary (5 marks)

ပေးထားသောကွက်လပ်များကိုဖြည့်ပါ။

လယ်သမားလူငယ်

..... နယ်နေသည်။

h. Short Paragraph Reading (10 marks)

ပေးထားသောစာပိုဒ်ကို ရှုတ်ဆိုပါ။

မယ်ငွေ၏ သားကလေး

အသားဖြူဖွေး၏။

ကလေးထွေးသည်။

ယုယုယယပွေ့ချီထား၏။

နွေးနွေးထွေးထွေးထားပါ။

The 21 items checklist for parents was developed by the researcher on the basis of reviewing related literatures concerning the role of parents in improving children reading and it was used to get some information about parents' support in reading and demographic data of children and their parents. A pilot study was conducted with a sample of 29 kindergarten students from B.E.P.S (4) Hlaing in Yangon Region to test whether test instructions were easy to understand and items were appropriate and relevant to age and development of kindergarten students. Accordingly, the Myanmar Reading Assessment Test has Cronbach's alpha of 0.925. The values of Cronbach's Alpha for each subtest were described in table 2. The range of Cronbach's Alpha values of subtests is from 0.52 to 0.93. Therefore, it can be said that the test has good internal consistency and is highly reliable for reading readiness of kindergarten students. Moreover, the validity of MRAS can be proven by tandem reviews of professionals in Myanmar. In addition to high reliability, MRAT also has good content validity.

Table 2

Cronbach's Alpha for Each Subtest of Myanmar Reading Assessment Test Items

Reading Skills	Letter Recognition	Poem Reciting	Word Reading	Rhyming	Picture-Word Matching	Spelling	Vocabulary	Short Paragraph Reading
Cronbach's Alpha	0.92	0.93	0.91	0.91	0.9	0.91	0.92	0.92

3.4. Data Collection Procedure

Before collecting data, permissions for administering the reading test to the kindergarten students were sought from township education officers, school principals, and the parents or guardians of the students. A consent form was attached to obtain the permissions for the survey in each parental involvement checklist. The checklists were sent to the parents via their class teachers. For some parents who are not literate enough to respond to the checklist, the researcher conducted structured interviews to complete the checklist.

Myanmar Reading Assessment Test was administered to 222 kindergarten students from Yangon Region and Rakhine State. For reading test administration, two trained research assistants conducted reading tests with each student using MRAT. During reading test administration, the student was asked to point out the answers and to read the sentences by

filling in the blanks (e.g., point to the letters what the test administrator says, recite the poems, choose the correct word for each picture, and read the sentences by completing the missing words). After collecting the required data, data entry was carried out using Statistical Packages for the Social Sciences (SPSS) software version 25 and R Studio version 4.3.1. Finally, quantitative data analysis and interpretation were conducted using descriptive statistics, percentiles, independent sample t-test, and one-way analysis of variance. Then quantitative data analysis and conclusion were drawn from the interpretation of the results.

4. Findings and Discussion

4.1 Distribution of Myanmar Reading Assessment Test (MRAT) Scores

Table 3

Descriptive Statistics of each subtest of Myanmar Reading Assessment Test (MRAT) Scores

Subtests	No. of items	Mean	Percentage	SD
Letter Recognition	5	3.18	63.6%	1.587
Poem Reciting	5	3.74	74.8%	1.573
Rhyming	5	2.91	58.2	1.926
Picture Word Matching	10	6.15	61.5%	4.095
Word Recognition	5	3.11	62.2%	2.116
Spelling	5	2.58	51.6%	1.97
Vocabulary	5	1.86	37.2%	1.958
Short Paragraph Reading	1	5.45	54.2%	4.582
Overall MRAT	41	28.98	57.91%	19.807

According to descriptive statistics of Myanmar Reading Assessment Test (MRAT) scores as shown in table 3, the overall score of MRAT was 28.98 (57.91%) out of 50. Letter recognition, rhyming, picture word matching, word recognition, spelling, and short paragraph reading were found in the range between 51.6% and 63.6%. Most of the students got highest scores (74.8%) in poem recitation because they could easily recite poems without using much reading skill. Most of the poems in kindergarten Myanmar reading textbook are familiar to the

kindergarten students. However, vocabulary items were found to be lower than overall scores, and it had mean value of 1.86 (37.2%) out of 5. To get higher marks in vocabulary items, students need to have higher reading comprehension skills and reading fluency to collect more vocabulary.

Table 4

Distribution of students in different levels of reading achievement

Levels of Reading Achievement	Range	Frequency	Percentage
Below Basic	$0 \leq \text{MRAT} \leq 10$	57	25.7%
Basic	$11 \leq \text{MRAT} \leq 20$	15	6.8%
Satisfactory	$21 \leq \text{MRAT} \leq 30$	25	11.3%
Proficient	$31 \leq \text{MRAT} \leq 40$	37	16.7%
Advanced	$41 \leq \text{MRAT} \leq 50$	88	39.6%
Total	$0 \leq \text{MRAT} \leq 50$	222	100%

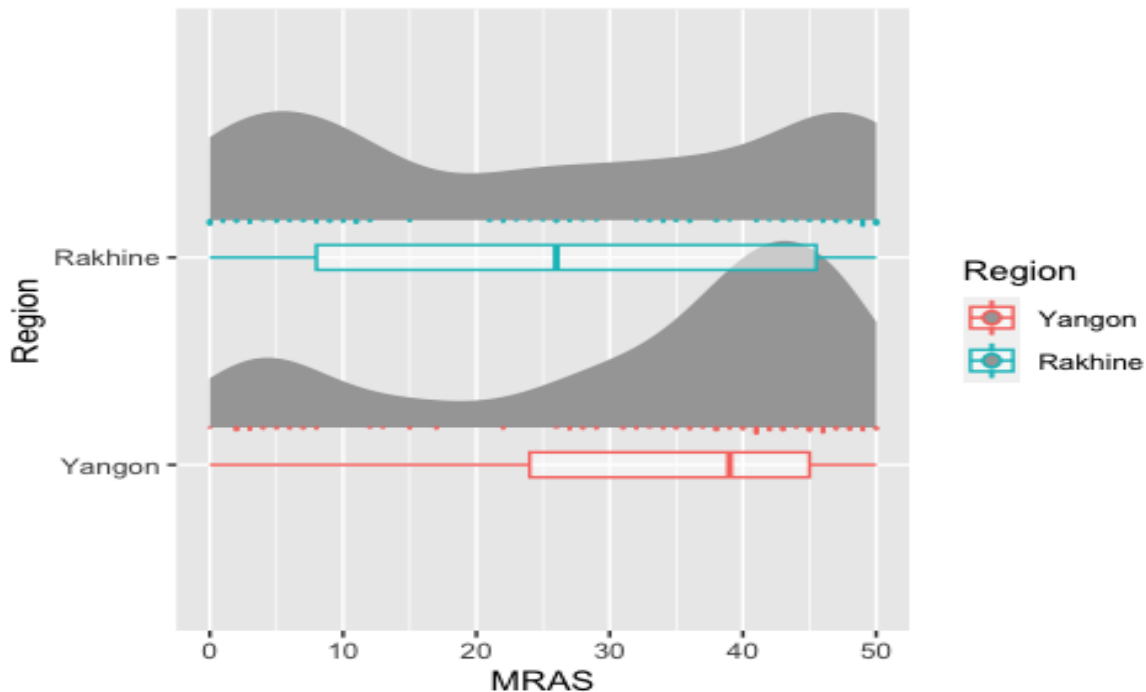
The score range in table 4, 57 (25.7%) shows students were below the basic level. This means that they cannot totally read and spell consonant cluster and vowel diacritics, words, and sentences. They do not have phonological awareness, but some can only read alphabets. However, there were 15 basic-level students (6.8%) who have phonological awareness but can only read by spelling each word. Sometimes they cannot read and comprehend the long and complex sentences. 25 students (11.3%) have a satisfactory level and can read and comprehend the whole sentence, but they do not have fluency in reading. 37 proficient readers (16.7%) and 88 advanced readers (39.6%) have a high level of reading comprehension and can read very fluently and proficiently. Among these groups, it can be said that those below the basic level do not have enough reading readiness skills and are at risk of reading deficiencies. In addition, concerning basic-level readers, their reading skill was found to be below the average level, so they should not also be neglected.

4.2. Comparison of Reading Readiness Skills of Kindergarten Students by Region

Descriptive statistics was done in order to examine the differences in reading readiness skills among kindergarten students by region. The mean score of students in Yangon is higher than that of students in Rakhine State. The visual presentation of these results is shown in Figure 2.

Figure 2

Comparisons for reading readiness assessment test scores of kindergarten students by region



In order to examine whether the mean differences are significant or not, an independent sample t-test was used. There was a statistically significant difference in the reading readiness skills of kindergarten students by region at the 0.01 level. It can be concluded that kindergarten students in Yangon have higher reading readiness skills than those in Rakhine State. Since the incidence of poverty in Rakhine might be the highest in the country at 78%, against a rate of 37.5% nationally (Gupta, 2016), the learning environment of schools and families is not very supportive for children. Moreover, many schools in Rakhine State are not well-facilitated and cannot create a conducive learning environment for children. Then, due to the frequent transfer of teachers to big cities, very few teachers work in Rakhine State permanently. Therefore,

students in Rakhine State have fewer learning opportunities than those in Yangon Region. Due to the highest poverty rate in Rakhine State (Gupta, 2016), the number of preschools in Rakhine State is lower compared with other states and regions. Thus, most of the children in Rakhine State do not have preschool experience. Just 5.4 % of children can receive the preschool programme (Nirmala Rao et al., 2017). Intellectual and social stimulation in early childhood, as provided in preschool, is important for a child's development to his or her full potential. Children tend to have better reading skills when they enter kindergarten.

Table 2

Result of Independent Sample t-test for Reading Readiness Skill of Kindergarten Students by Region

Scale	Region	Mean	SD	<i>t</i>	<i>df</i>
MRAT	Yangon	32.41	15.78	2.98**	214.63
	Rakhine	25.53	18.56		

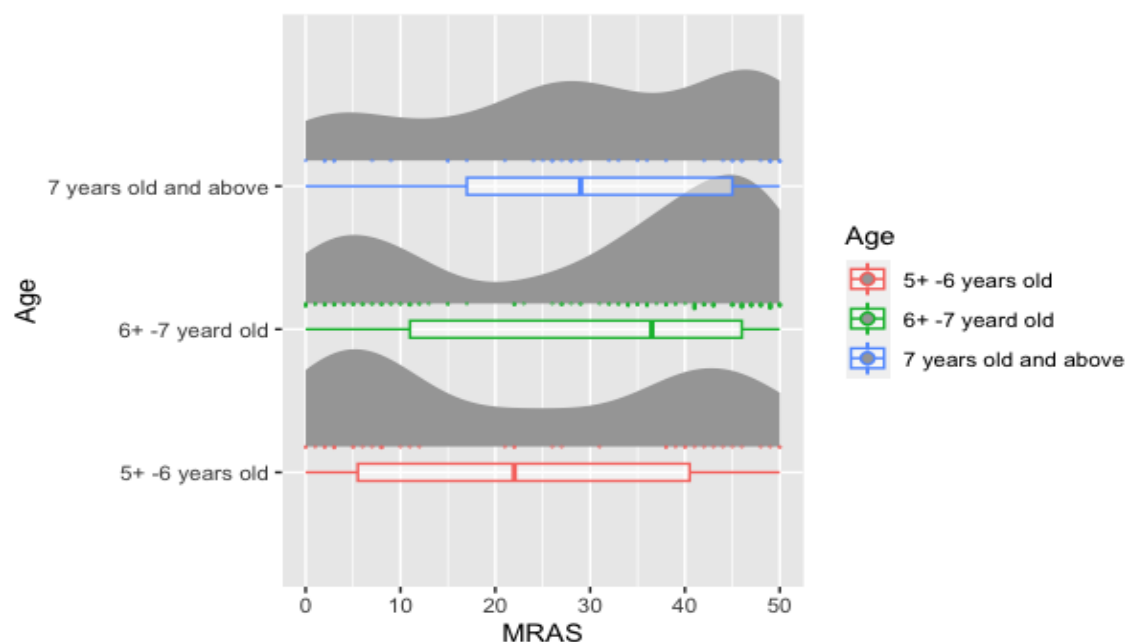
*Legend: **The mean difference is significant at the 0.01 level.*

MRAT = Myanmar Reading Assessment Test

4.3 Comparison of Reading Readiness Skill of Kindergarten Students by Age Group

Figure 3

Comparisons for Reading Readiness Assessment Test Scores of Kindergarten Students by Age



There were three age groups of kindergarten students in this study: 5+–6 year olds, 6+–7 year olds, and 7+ years old and above. In order to examine reading readiness skills of kindergarten students by age groups, descriptive statistics was done. It was found that the mean score of students who are between 6 and 7 years old was the highest and that of students who are between 5 and 6 years old was found to be the lowest in Myanmar Reading Assessment Test. A visual presentation of these results is shown in Figure 3.

To test the confirmation of the significant differences in Kindergarten students' reading readiness skills by their age groups, one-way analysis of variance (ANOVA) was executed.

Table 3

ANOVA Result of Reading Readiness Skill by Age Group

Scale	Age	Mean	SD	F	p
MRAT	5+ - 6 years	22.97	18.21	2.86	.059
	6+ -7 years	30.42	17.35		
	7 years old and above	29.57	29.37		

According to the results of the ANOVA, there was no significant difference in the reading readiness skills of kindergarten students in their age group. It means that there was no age effect on reading readiness skills by age groups. This finding was consistent with the findings of previous studies (DeMeis & Stearns, 1992; Denti & Guerin, 1999; Gredler, 1980). According to Gredler (1973), age is not an absolute predictor of a child's success in reading; it is relative only to the child and in relation to other children in his or her class. Hence, their physical and mental development, socioeconomic status, pre-school attendance before kindergarten, and parent support in reading are needed to be considered in their reading development.

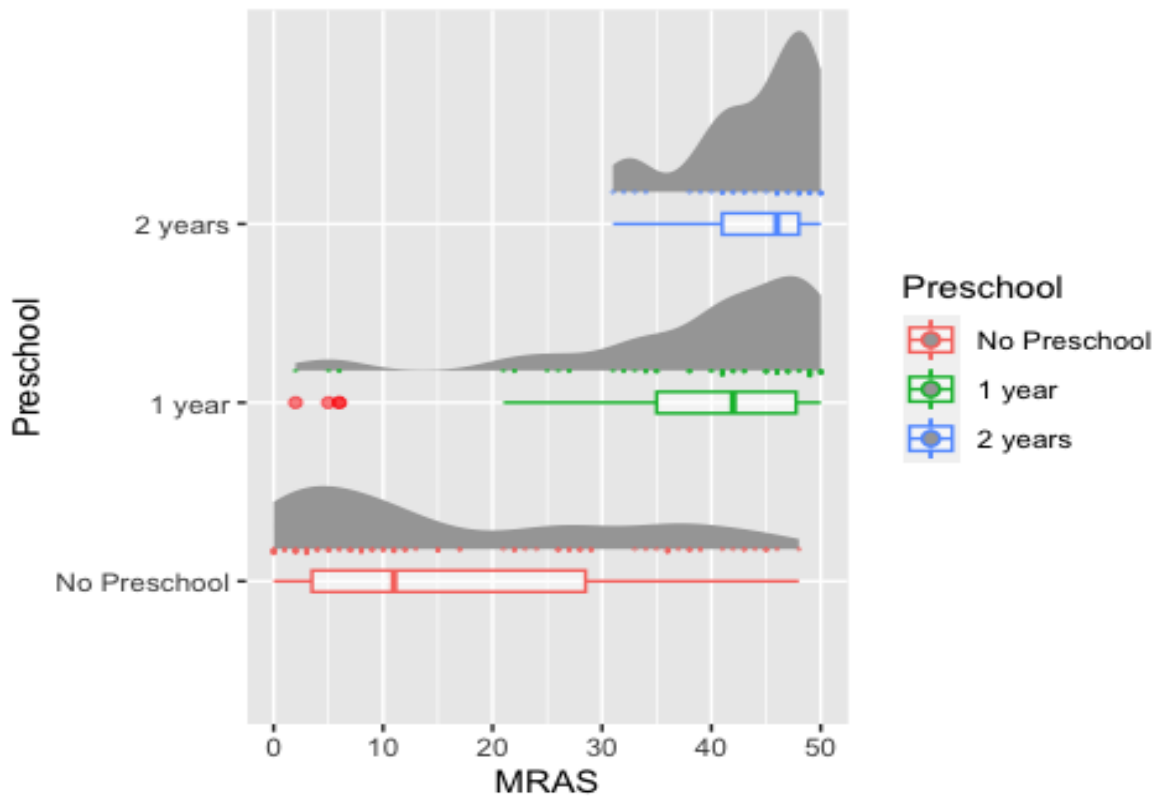
4.4. Comparison of Reading Readiness Skills of Kindergarten Students by Years of Preschool Experience

In order to explore whether reading readiness skills of kindergarten students were different depending on the years of preschool experience they had, descriptive statistics were done. According to years of preschool experience of kindergarten students, there were three

groups: (1) students with no preschool experience; (2) students with one year of preschool experience; and (3) students with two years of preschool experience. It was observed that the mean scores of students who had two years of preschool experience were highest on Myanmar Reading Assessment Test, and the mean score of students who had no preschool experience was lowest on that score. A visual presentation of these results is also shown in Figure 4.

Figure 4

Comparisons for Reading Readiness Assessment Test Scores of Kindergarten Students by Preschool Experience



To test the confirmation of the significant differences in kindergarten students' reading readiness skills based on the years of preschool experience they had, a one-way analysis of variance was executed. According to the results of the ANOVA, there was a significant difference in Kindergarten students reading readiness skills based on the years of preschool experience they had at the 0.001 level.

Table 4*ANOVA Result of Reading Readiness Skill by Preschool Experience*

Scale	Age	Mean	SD	F	p
MRAT	No Preschool	16.86	14.84	104.75***	.000
	1 year	39.47	11.32		
	2 years	44.30	5.38		

*Legend: ***The mean difference is significant at the 0.001 level.**MRAT = Myanmar Reading Assessment Test*

In addition to examining the highly significant differences in reading readiness skills of kindergarten students by years of preschool experience they had, Post-Hoc Test was executed by Tukey HSD method. It became apparent that the mean scores of students who had no preschool experience were significantly lower than those of students who had either one or two years of preschool experience in Myanmar Reading Assessment test.

Table 5*Results of Tukey HSD Multiple Comparisons for Reading Readiness Skill by Years of Preschool Experience*

Scale	(I) Years of Preschool Experience	(J) Years of Preschool Experience	Mean Difference (I-J)	p
MRAT	0 year	1 year	-22.61***	.000
		2 years	-27.43***	.000

*Legend: ***The mean difference is significant at the 0.001 level.**MRAT = Myanmar Reading Assessment Test*

It can reasonably be concluded that students who attended preschool for one or two years have better reading readiness than those who had no preschool experience. This finding was consistent with several studies showing students who experienced a good pre-reading programme in preschool have a high level of reading readiness (Clark, 2009; Magnuson et al., 2007; Majzub & Kurnia, 2010; McAfee & Leong, 1997; Mwoma, 2018). Preschool attendees are likely to become better readers than their non-preschool peers once they enter kindergarten

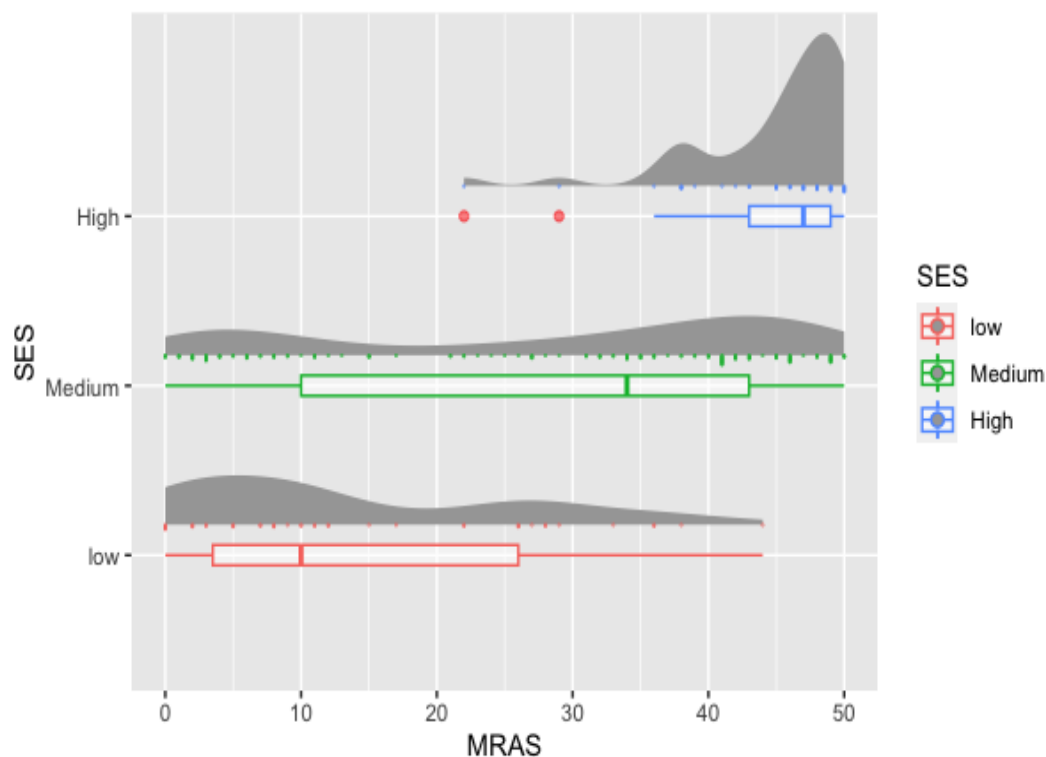
(Bakken et al., 2017; Barnett et al., 1998; Barnett, 2008; Barnett et al., 2005; Reynolds, 2000). The preschool curriculum is set up to equip children with some necessary skills, such as print awareness, letter sound recognition, and phonological awareness, to get them ready to learn reading in their formal education setting.

4.5. Comparison of Reading Readiness Skills of Kindergarten Students by Socioeconomic Status

In order to explore whether the reading readiness skills of kindergarten students were different by socioeconomic status (SES), checklist of parents' education and occupation was used to collect the required data. Based on the scores, SES of parents was divided into three groups by percentile rank. These groups have (1) low, (2) middle, and (3) high socioeconomic statuses. The total score of socioeconomic status checklist is 24. For that categorization, SES checklist scores lower than 6 were identified as low socioeconomic status. Checklist scores between 6 and 12 were considered middle socioeconomic status, and checklist scores above 12 were regarded as high socioeconomic status.

Figure 5

Comparisons for Reading Readiness Assessment Test Scores of Kindergarten Students by Socioeconomic Status



It was observed in the descriptive statistics that the mean scores of students who were from high socioeconomic conditions were highest on Myanmar Reading Assessment Test, and the mean scores of students who were from low socioeconomic conditions were lowest on that score. A visual presentation of these results is also shown in figure 5.

To test the confirmation of the significant differences in reading readiness skills among kindergarten students by their socioeconomic status, a one- way analysis of variance was executed. According to the results of the ANOVA, there was a significant difference in kindergarten students.

Table 5

ANOVA Result of Reading Readiness Skill by Socioeconomic Status

Scale	Age	Mean	SD	F	p
MRAT	Low	14.27	12.63	46.89***	.000
	Middle	28.50	17.02		
	High	44.98	5.97		

*Legend: **The mean difference is significant at the 0.001 level.*

MRAT = Myanmar Reading Assessment Test

In addition to examining the highly significant differences in reading readiness skills of kindergarten students by socioeconomic status, Post-Hoc Test was executed by Tukey HSD method. It became apparent that the mean score of students who were from high socioeconomic status was significantly higher than that of students who were from middle and low socioeconomic status in Myanmar Reading Assessment test.

Table 5

Results of Tukey HSD Multiple Comparisons for Reading Readiness Skill of Kindergarten Students by Socioeconomic Status

Scale	(I)Socioeconomic Status	(J)Socioeconomic Status	Mean Difference (I-J)	p
MRAT	Low	Middle High	-14.39***	.000
			-30.86***	.000

*Legend: **The mean difference is significant at 0.001 level.*

MRAT = Myanmar Reading Assessment Test

It can be reasonably concluded that students from high socioeconomic status had better reading skills than the other two groups (low and middle socioeconomic status). Students from low socioeconomic conditions had the lowest reading readiness among the three groups. Because of their high socioeconomic status, parents can provide materials, and they are more interested in their children's education and also involved in the children's reading programme. However, most of the parents with low socioeconomic status are working-class and did not graduate. Hence, children were not provided with opportunities to get reading aloud from their parents, participate in reading programmes, and do exercises together at home. On the other hand, children in poverty lack the ability to concentrate or focus on learning. Some children from low-SES backgrounds lack organisation and materials for building literacy experiences. This result was consistent with the previous research findings that children's reading might reflect the poor reading background of their parents if such parents are illiterate or have low-level exposure to education or reading culture (Askov, 2004; Berkowitz et al., 2017).

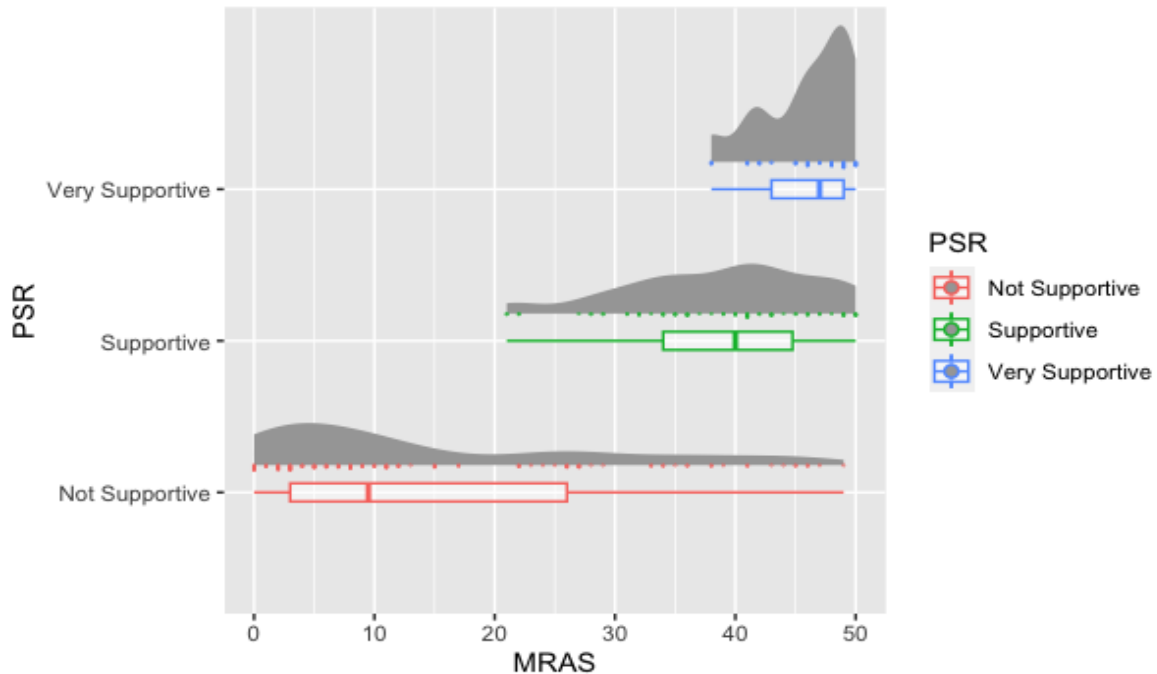
4.6. Comparison of Reading Readiness Skills of Kindergarten Students by Parents' Support in Reading

In order to explore how the reading readiness skills of kindergarten students were affected by their parents' support in reading, checklist of parents' support in reading was used to collect the required data from the parents. Based on the checklist scores, parents of kindergarten students were divided into three groups. They are (1) not supportive parents, (2) supportive parents, and (3) very supportive parents. The total score of parents' support on the reading checklist is 12. For that categorization, parents who got lower than 6 on the checklist were identified as not supportive parents. Parents with checklist scores between 6 and 8 were considered supportive parents and students with checklist scores above 8 were regarded as having very supportive parents.

The descriptive statistics observed that the mean score of students whose parents were very supportive was highest and that of students whose parents were not supportive was lowest in Myanmar Reading Assessment. A visual presentation of these results is also shown in figure 6.

Figure 6

Comparisons for Reading Readiness Assessment Test Scores of Kindergarten Students by Parents' Support in Reading



To test the confirmation of significant difference in reading readiness skills among kindergarten students due to their parents' support in reading, a one-way ANOVA was executed again. According to the result, there was a significant difference in reading readiness skills of kindergarten students by their parents' support in reading.

Table 6

ANOVA Result of Reading Readiness Skill by Parents' Support in Reading

Scale	Parents' Support in Reading	Mean	SD	F	p
MRAT	Not Supportive	15.26	14.43	168.56***	.000
	Supportive	38.63	7.82		
	Very Supportive	45.94	3.64		

*Legend: ***The mean difference is significant at the 0.001 level.*

MRAT = Myanmar Reading Assessment Test

In addition to examining the highly significant differences in reading readiness skills of kindergarten students by their parents' support in reading, Post-Hoc Test was executed by Tukey HSD method. It became apparent that the mean scores of students whose parents were very supportive in their reading were significantly higher than that of students whose parents were supportive and those whose parents were not supportive in Myanmar Reading Assessment Test. It can be reasonably concluded that students whose parents were very supportive in their reading had better reading readiness than the other two groups (supportive and not supportive). It was prominent that students whose parents were not supportive in their reading had lowest reading readiness among the three groups. It can be said that parents are the first teachers of their children's home literacy environment. Parents can prepare their children to gain reading readiness by participating together in reading activities (Ece Demir-Lira et al., 2019; Zivan & Horowitz-Kraus, 2020). The more parents are involved in their students' reading, the better reading skills they have. This finding was consistent with previous research findings that demonstrated the link between a parent's involvement in a child's reading and a child's subsequent achievement in reading (Iroegbu & Igweike, 2020; McMahon, 2010; Rathbun & Hausken, 2001).

Table 7

Results of Tukey HSD Multiple Comparisons for Reading Readiness Skill of Kindergarten Students by Parents' Support in Reading

Scale	(I)Parents' Support in Reading	(J) Parents' Support in Reading	Mean Difference (I-J)	p
MRAT	Not Supportive	Supportive	-23.37***	.000
		Very Supportive	-30.68***	.000

*Legend: ***The mean difference is significant at 0.001 level.*

MRAT = Myanmar Reading Assessment Test

5. Conclusion

This study examined the reading readiness of kindergarten students in Myanmar and compared the reading readiness skills by age, region, preschool experiences, socioeconomic status, and parents' support for reading. According to the statistical analysis result, the reading readiness skills of kindergarten students were greatly affected by their years of preschool

experience, socioeconomic status, the regions in which they live, and their parents' support in reading. However, age is not a considerable factor in affecting kindergarten students' readiness.

Due to the different geographical conditions of the country, each region has different socioeconomic backgrounds that significantly affect the socioeconomic condition of parents and basic infrastructures such as health and education. Therefore, according to the findings of this study, most of the students from Rakhine State cannot access qualified preschool programmes and enough parental support for their literacy development compared with those in Yangon Region.

Parental support in children's reading is also a significant factor affecting the reading readiness of kindergarten children. This finding was consistent with the work of several scholars (Ece Demir-Lira et al., 2019; Iroegbu & Igweike, 2020; McMahon, 2010; Ramey et al., 1998; Rathbun & Hausken, 2001; Secord, 2009; Walker et al., 2014; Zivan & Horowitz-Kraus, 2020). Because of their lower educational background and low-paid jobs, most parents from low socioeconomic classes devote most of their time to earning a living instead of participating in their children's learning. Therefore, socioeconomic conditions became a factor in the reading readiness of kindergarten students. This result is also congruent with the previous studies (Berkowitz et al., 2017; Hernandez, 2011).

The results of longitudinal studies conducted by some scholars (Barnett et al., 1998; Barnett, 2008; Reynolds, 2000) indicated that there was a strong relationship between children's reading readiness and their preschool experiences. Preschools are the optimal places to prepare children to gain essential readiness skills in their formal education setting (Barnett et al., 2005; Cetin et al., 2018; Clark, 2009; Magnuson et al., 2007; Magnuson & Waldfogel, 2005; Mwoma, 2018). However, only some children in Myanmar can access preschool programmes. According to National EFA Review Report 2014, there were 12,116 community-based ECD centres, day-care centres, mother circles, preschools, and school-based preschool classes operated or organised by the government in AY 2013–2014, INGOs, NGOs, communities, and private organisations, and 480,000 children received ECCE services (National EFA review report: Myanmar, 2014) but still not enough. However, most preschools exist in urban areas. In Myanmar, 76.6 percent of children aged 4 are out of school, according to Department of Education Research, Planning, and Training data, and this rate is the highest

among the Southeast Asian countries. This is largely a result of inadequate supply of early childhood development services (Myanmar Report on Out of School Children Initiative, 2018).

Children who experienced the excellent preschool programmes have fine gross motor skills and print awareness (Pullen & Justice, 2003). They have fullest potential for learning to read and write. Some children who have not attended preschools are not ready yet. Therefore, kindergarten teachers may face many challenges and difficulties with the readiness gap in reading and writing. They may not teach all children equally and effectively. To solve these problems, prior learning before kindergarten or grade 1 is needed for all children to fulfil the readiness gap.

Among the many factors that relate to the lack of reading readiness of children, parent involvement in children's reading, living in marginalised areas, and socioeconomic conditions cannot be solved directly and significantly. However, accessing every child with qualified preschool programmes regardless of geographical barriers should only be focused on with the support of NGOs, INGOs, CBOs, and CSOs. In addition, parental education should be given to the parents in remote areas about child literacy development with the help of local and international organisations. In this way, they are prepared to start schooling with sufficient readiness for their literacy development.

In this study, the sample students were selected only from Yangon Division and Rakhine State because of the scarcity of time; students from other regions and states were excluded. Although this study was conducted using the questionnaire survey method for parents, case studies of 53 below-basic-level readers are needed to get a deep understanding of the causes of reading readiness deficiencies. Due to the scarcity of time and resources, such a method is impossible for this study. The socio-emotional condition of below-basic-level readers should be explored in predicting the factors that contribute to their readiness. It is necessary to consider whether below-basic-level readers have retardation in cognitive development, attention deficit disorder, or dyslexia. Because the naming of the reading disabilities to a child cannot be done only by researcher, the agreements from counsellors, clinicians, and psychologists are needed to identify the children with reading disabilities. Despite some limitations, the results of this study highlight the important factors that contribute to the reading readiness of kindergarten students.

It is recommended that a study of longitudinal design should be conducted as future research to investigate whether the reading readiness skills of kindergarten students relate to writing. Moreover, in-depth case study is required to explore whether the teaching styles kindergarten teachers use in teaching reading to children are effective or not. More research is required to examine the effect of reading readiness of kindergarten students on academic achievement in the later grades.

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